No Smell Like An Old Smell

By Michael Shaw — December 3, 2018

A scene that appears in many movies involves a recently bereaved individual who picks up a garment that belonged to their departed loved one. The bereaved will draw the garment close to their face, and take a long whiff. Emotional memories are thus conjured up (“Smells ring bells”). This concept is known as odor-evoked autobiographical memory, involuntary memory, or the Proust phenomenon [2].

The Proust term refers to a famous passage from Marcel Proust’s novel In Search of Lost Time, called the “episode of the madeleine [3].” An excerpt follows:

No sooner had the warm liquid mixed with the crumbs touched my palate than a shudder ran through me and I stopped, intent upon the extraordinary thing that was happening to me. An exquisite pleasure had invaded my senses, something isolated, detached, with no suggestion of its origin. And at once the vicissitudes of life had become indifferent to me, its disasters innocuous, its brevity illusory…Whence did it come?

What did it mean? How could I seize and apprehend it? … And suddenly the memory revealed itself. The taste was that of the little piece of madeleine which on Sunday mornings at Combray… my aunt Léonie used to give me, dipping it first in her own cup of tea or tisane. The sight of the little madeleine had recalled nothing...
Without a doubt, our olfactory sense is about as basic as it gets. Of course, not all odors are pleasant—especially those that can be classified as “body odors.” Anthropologist Louis Leakey even posited that human body odor might have evolved to fend off predators. While trademarked commercial deodorants only date back to 1888 (Mum), history records that the ancient Egyptians, Greeks, and Romans were vitally concerned with masking B.O.

These days, deodorants are hardly newsworthy, but have you ever heard of old-person smell? It turns out that there is some real science on this. A review article from 2010 entitled “Odor Associated with Aging” details some interesting results:

The review article cites a study from 2001 that links old-person smell to the compound 2-Nonenal, which was not detected at all in participants aged less than 40 years, but was detected in 69% of participants aged 40 years or more. The odor of 2-nonenal was characterized as similar to old pomade and candle wax, having a fishy or resin-like odor, and is believed to be the key element in odors associated with aging. The odor has also been described as unpleasant—greasy, grassy.

Generation of 2-nonenal is related to oxidative degradation of omega-7 unsaturated fatty acids. Omega-10 unsaturated fatty acids were found in sebum samples from most of the study participants, with omega-7 unsaturated fatty acids particularly high in middle-aged and elderly participants. Omega-10 unsaturated fatty acids are known to increase with age.

Conventional hygiene is not particularly effective in removing this compound (or its precursors), as it is insoluble in water, and most soaps don’t remove much of it. Various companies tout persimmon/green tea soap as an effective hygiene aid. Sufferers might also consider preparations designed to remove all human odor—as would be used by hunters.
